

March 28, 2017

Laws of Exponents

① Product  $x^2 \cdot x^3 = x^{2+3=5} = x^5$

② Power  $(x^2)^3 = x^{2 \cdot 3=6} = x^6$

③ Quotient  $\frac{x^3}{x^2} = x^{3-2=1} = x^1 = x$

④ Negative  $\frac{x^2}{x^3} = x^{2-3=-1} = x^{-1} = \frac{1}{x}$

⑤  $\frac{a^{-m}}{1} = \frac{1}{a^m}$

⑥  $\frac{1}{a^{-m}} = \frac{a^m}{1} = a^m$

Mar 27-9:03 AM

Do 5.5 #1 - #57 m3

\* Quiz on Wed

5.1 - 5.6

Mar 27-9:33 AM

$$\frac{2^1 p^{-4}}{3 p^9} = \frac{2}{3 p^9 \cdot p^4}$$

$$= \frac{2}{3 p^{13}}$$

Mar 27-9:36 AM

$$\frac{y^{-2}}{x^{-3}} = \frac{\frac{1}{y^2} \text{ K}}{\frac{1}{x^3} \text{ F}}$$

$$= \frac{1}{y^2} \cdot \frac{x^3}{1} = \frac{x^3}{y^2}$$

$$\frac{y^{-2}}{x^{-3}} \text{ (crossed out)} = \frac{x^3}{y^2}$$

Mar 27-9:40 AM

5.6 multiplication

$$x(2x+4)$$

$$= x \cdot 2x + x \cdot 4$$

$$= \underbrace{2x^2 + 4x}_{\text{unlike terms}}$$

Mar 27-9:43 AM

$$(x+2)(x+3)$$

$$x \cdot x + x \cdot 3 + 2 \cdot x + 2 \cdot 3$$

$$x^2 + \underbrace{3x + 2x}_{\text{like terms}} + 6$$

$$x^2 + 5x + 6$$

Mar 27-9:46 AM

$$(x+y)(2-y+x)$$

$$x \cdot 2 + x \cdot (-y) + x \cdot x \\ + y \cdot 2 + y \cdot (-y) + y \cdot x$$

$$2x - xy + x^2 + 2y - y^2 + xy$$

$$x^2 - xy + 2x + 2y + xy - y^2$$

Mar 27-9:48 AM